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(58) Field of search
UK CL (Edition J) E1D DDP DLCKM DLCKN DPB
INT CL⁴ E04H

(54) Post socket: gravel boards

(57) A post support comprises a housing (11) formed from a single piece of sheet metal and welded to a stem (10). An end portion of a post can be clamped in the housing by operation of a nut and bolt (24,25). Lugs (46,48) project from opposite side walls of the housing for connection to gravel boards. The lugs may be integral or separately formed. A fastening strap embracing the housing (11) may replace flanges (20,21).

FIG 2

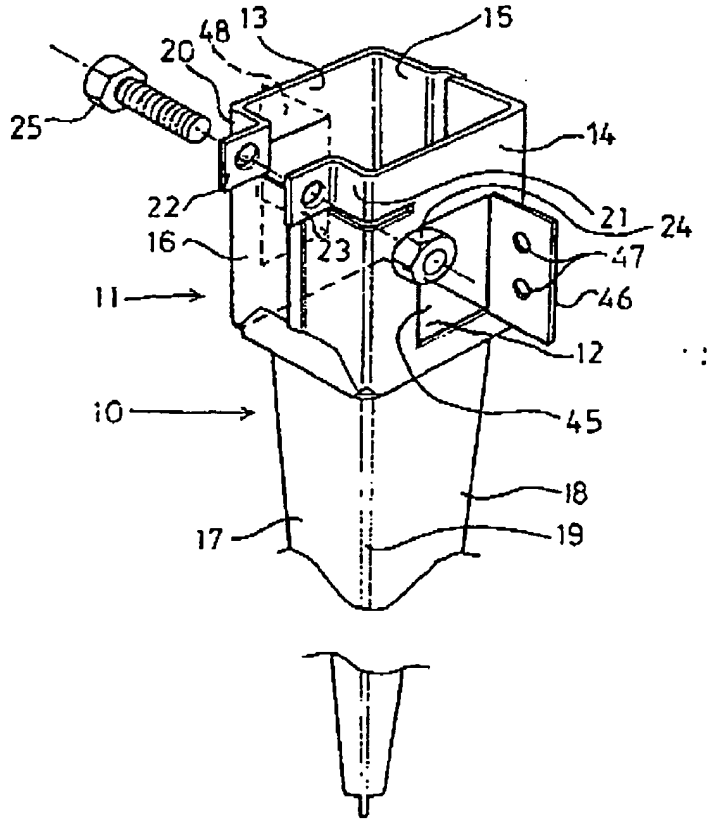

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FIG 1

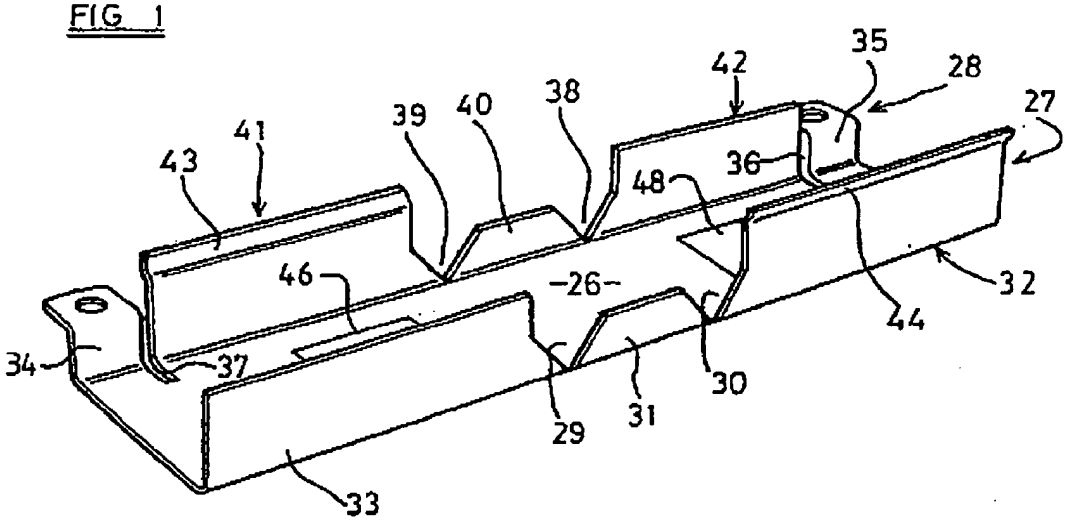
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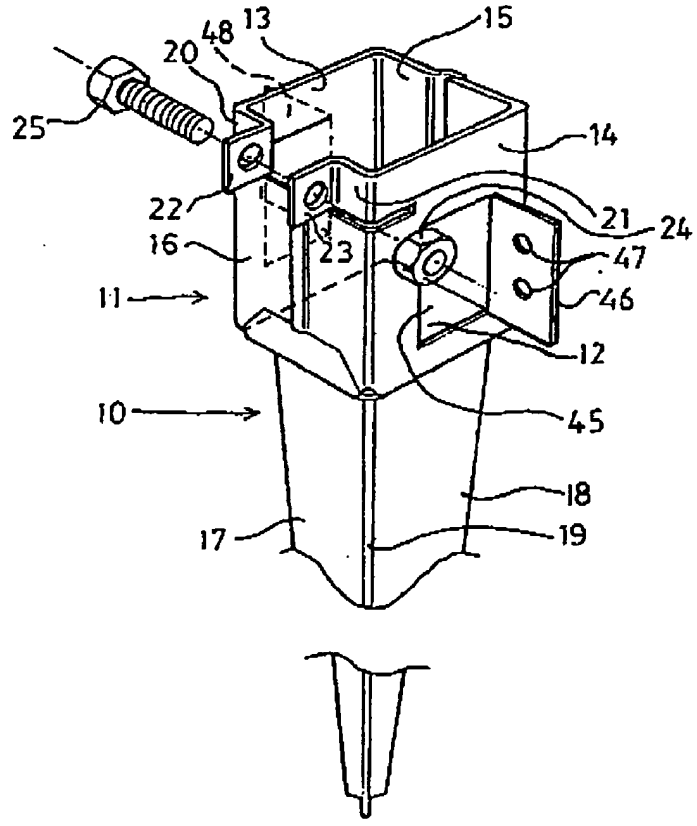
FIG 2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PATENTS ACT 1977
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Title: "Post Support and method of making same"

Description of the Invention

The present invention relates to a post support of the kind comprising an elongated stem and, at one end of the stem, a housing for an end portion of a post. Such post supports are commonly fabricated from steel components, the several components of a support being united with one another by welding. The housing of a post support of this kind usually includes limbs which can be flexed relative to walls of the housing to clamp an end portion of the post in the housing and a nut and bolt are provided for drawing the limbs into clamping engagement with the post.

It is common to attach to the posts of a fence a number of boards, each of which extends between a pair of adjacent posts and which rests on or is near to the ground. Such boards are referred to as "gravel boards" and are arranged with their respective lengths extending along the fence from one post to another.

According to a first aspect of the present invention, there is provided a post support comprising an elongated stem and, at one end of said stem, a post engaging part adapted for co-operation and secure engagement with a post, wherein said post engaging part is provided with means extending outwardly therefrom, said means being adapted for engagement with a gravel board or the like.

Preferably said post engagement means comprises a housing adapted to accommodate the lower end of the post and wherein said gravel board engagement means comprises one or more lugs extending outwardly from a pair of opposite sides of said housing.

Said lugs may be secured to said housing by any suitable means or may be formed integrally therewith.

According to another aspect of the present invention, there is provided a post support comprising an elongated stem and, at one end of the stem, a housing for an end portion of a post, wherein the housing has an open end

remote from the stem and includes opposite side walls and a bottom wall, wherein there is a respective opening in each side wall and wherein a lug which is integral with the side wall projects from a margin of the opening outwardly of the housing.

The lugs of a post support in accordance with the first aspect of the invention can be used conveniently for securing gravel boards to the support. Each lug may be formed with one or more apertures suitable for receiving a screw which can be driven into a gravel board. Alternatively, there may be provided on each side wall of the post support a pair of lugs which are spaced apart by a distance corresponding to the thickness of a gravel board, so that the gravel board can be merely be placed between the lugs and will be held upright by the lugs. In this case, the use of fasteners to secure a gravel board to a lug is not essential although one or more apertures may be formed in one of the lugs to receive screws.

According to a second aspect of the invention, there is provided a method of forming a post support comprising an elongated stem and, at one end of the stem, a housing for an end portion of a post. The method includes forming a channel which has a base, flanges along opposite margins of the base and respective flaps defined in opposite end portions of the base by slits, bending the flaps relative to the base of the channel to lie outside the channel, bending the end portions of the base at right angles to a mid-portion of the base to form mutually parallel, opposite side walls of the housing and attaching the stem to the mid-portion of the base at the outside of the housing.

According to a still further aspect of the invention, we provide means for attaching a gravel board to a post support, said means comprising one or more members each having a first part for securement to a post engaging part of a post support and a further part adapted for engagement with the gravel board.

An example of a post support embodying the first aspect of the invention and which is formed by a method according to the second aspect will now be described, wherein:-

FIGURE 1 shows a channel from which a housing of the post support is formed; and

FIGURE 2 illustrates the completed support.

The post support illustrated in Figure 2 comprises an elongated stem 10 and a housing 11 at one end of the stem. As viewed in direction along the

stem, the housing is rectangular and may be square. Alternatively, in a case where the housing is intended to receive a post having a transverse cross-sectional shape other than that of a square, the shape of the housing may be varied accordingly. At its end remote from the stem, the housing 11 is open. An opposite end of the housing is defined by a bottom wall 12, which is preferably flat.

There extends upwardly from bottom wall 12 a pair of opposite side walls 13 and 14, a rear wall 15 and a front wall 16. These walls also are preferably flat and perpendicular to the bottom wall 12.

The stem 10 comprises a number of tapered blades disposed with their narrower ends remote from the housing 11 and their wider ends adjacent to the housing. In the particular example illustrated, there are three such substantially flat blades and these are identified by the reference numbers 17, 18 and 19. It will be understood that the number of blades may be varied and that the disposition of the blades relative to one another may differ from that shown in the accompanying drawing, where the blades are spaced apart equally about a longitudinal axis of the stem. Conveniently, the blades 17 and 18 are formed integrally with one another by bending a tapered strip of metal along its length and the blade 19 is welded to that strip.

Each of the blades 17, 18 and 19 is welded at its wider end directly to the bottom wall 12 of the housing at the exterior of the housing.

The housing 11 also comprises a pair of cranked limbs 20 and 21 which lie adjacent to the open end of the housing. A free-end portion of the limb 20 constitutes an apertured lug 22 which is substantially flat. The limb 21 includes a corresponding lug 23 which is in spaced, face-to-face relation with the lug 22. The lugs project outwardly relative to the front wall 16 of the housing and are perpendicular thereto. A fastener can be applied to the lugs 22 and 23 to draw these towards each other. The fastener typically comprises a nut 24 and bolt 25.

The limb 20 extends from the lug 22 across a minor part of the front of the housing to a corner of the housing and a part of the way along a side of the housing, for example to a position mid-way between the front and the rear of the housing. At this position, the limb merges with the side wall 13. The limb 21 similarly extends from the lug 23 across a minor part of the front of the housing and partly around the side of the housing.

There is in the side wall 14, at a level spaced downwardly from the limb 21, an opening 45. The opening is preferably spaced from all margins of the

side wall 14 and is preferably rectangular. The opening has at least one rectilinear margin which is parallel to the rear wall 15. There projects outwardly of the housing along this margin of the opening a lug 46 which is at right angles to the side wall 14 and parallel to the rear wall 15. The lug 46 is preferably flat and there are formed in the lug apertures 47 to receive screws, by means of which a gravel board can be secured to the housing. As shown, the lug 46 is nearer to the rear wall 15 than to the front wall 16, so that the gravel board can be spaced equally from the front and rear walls of the housing.

The side wall 13 is formed with an opening corresponding to the opening 45 and is provided with a lug 48 corresponding to the lug 46.

The housing 11, including the bottom wall 12, the side walls 13 and 14, the front and rear walls 16 and 15, the lugs 46 and 48 and the limbs 20 and 21 are formed from a single piece of sheet metal. An elongated, generally rectangular blank is cut from the sheet metal and opposite marginal portions of the blank are turned up to form the channel shown in Figure 1. This channel comprises a substantially flat base 26 with mutually parallel, substantially flat flanges 27 and 28 extending along opposite longitudinal margins of the base. Cut-outs 29 and 30 in the flange 27 divide a mid-portion 31 of that flange from opposite end portions 32 and 33 of the flange 27, these end portions being considerably longer than is the mid-portion 31. Relatively short end portions of flange 28 are divided from intermediate portions of that flange by respective slits 36 and 37 which extend across the full width of the flange 28 and partly across the base 26 of the channel. Each of the end portions 34 and 35 is pierced and cranked to form a respective one of the lugs 22 and 23. Cut-outs 38 and 39 in the flange 28 divide a mid-portion 40 of that flange from the intermediate portions 41 and 42 of the flange. These cut-outs do not extend significantly into the base 26. A joggle 43 is formed along that margin of the intermediate portion 41 which is remote from and parallel to the base 26. A corresponding joggle 44 is formed along the corresponding margin of the end portion 32 of the flange 27.

The lugs 46 and 48 are defined in opposite end portions of the base 26 of the channel by slitting the metal of the channel along three sides of a rectangle for each of the lugs. The lugs are bent outwardly of the channel into substantially parallel relation with the flanges 27 and 28. It will be understood that slitting of the metal to define the lugs 46 and 48 and the bending of these lugs relative to the remainder of the base 26 of the channel

would normally be carried out in a single step by means of a piercing tool. The blank may be pierced concurrently at other positions by the same tool, for example to form the cut-outs 29, 30, 38 and 39 and to form the slits 36 and 37. The apertures in the lugs and in the limbs 20 and 21 also may be formed by the same tool concurrently with piercing of the lugs.

The channel illustrated in Figure 1 is bent along a line extending between the cut-outs 29 and 38 and along a further line extending between the cut-outs 30 and 39 so that opposite end portions of the base 26 are brought into mutually parallel face-to-face relation to form the side walls 13 and 14 of the housing. That part of the base 26 which lies between the portions 31 and 40 forms the bottom wall 12 of the housing. The joggle 43 is brought into overlapping relation with a margin of the intermediate portion 42 and is secured thereto by welding. The joggle 44 is brought into overlapping relation with a margin of the end portion 33 and is secured thereto by welding.

The mid-portion 41 forms a part of the rear wall 15 and is welded to the end portions 32 and 33 in abutting relation thereto. The mid-portion 41 forms a part of the front wall 16 and is welded in abutting relation with the intermediate portions 41 and 42.

After welding of the housing 11 to the stem 10. The stem can be driven into the ground and a lower end portion of a post placed in the housing. If the nut and bolt 24 and 25 are then tightened to draw the lugs 22 and 23 towards each other, the limbs 20 and 21 are deflected relative to the walls of the housing to grip the post. It will be understood trat the end portion of the post which is received in the housing is required to have a size and shape such that it will fit without excessive clearance between the walls of the housing.

In a case where the stem 10 is formed of two components, the complete post support,excluding the nut and bolt, is a three-piece assembly.

The housing illustrated in Figure 2 may be modified by substitution for the limbs 20 and 21 of a separately formed strap which embraces the housing. The strap may be a one-piece component, having one pair of lugs corresponding to the lugs 22 and 23 for co-operation with a single fastener. Alternatively, the strap may be formed in two pieces, each piece having a pair of lugs for co-operation with a respective fastener so that there is one fastener adjacent to the front wall 16 and a further fastener adjacent to the rear wall 15. In the modified housing, welding of the lapped joint in the rear wall may be omitted, at least near to the top of the housing to facilitate

flexing of the housing under the clamping action of the strap. Alternatively, there may be slots extending longitudinally of the stem 10 in both the front and rear walls, to facilitate flexing of the housing under the clamping action of the strap.

It will be appreciated that whereas the above described embodiment has gravel board engaging lugs formed integrally with and pressed out from the post support, as an alternative lugs, channels or other board engaging means may be formed separately and subsequently secured to the post support.

The features disclosed in the foregoing description, or the following claims, or the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a method or process for attaining the disclosed result, as appropriate, may, separately or in any combination of such features, be utilised for realising the invention in diverse forms thereof.

CLAIMS:

1. A post support comprising an elongated stem and, at one end of said stem, a post engaging part adapted for co-operation and secure engagement with a post, wherein said post engaging part is provided with means extending outwardly therefrom, said means being adapted for engagement with a gravel board or the like.

2. A post support means according to Claim 1 wherein said post engagement means comprises a housing adapted to accommodate the lower end of a post and wherein said gravel board engagement means comprises one or more lugs extending outwardly from a pair of opposite sides of said housing.

3. A post support means according to Claim 2 wherein said lugs are secured to said housing.

4. A post support means according to Claim 2 wherein said lugs are formed integrally with said housing.

5. A post support comprising an elongated stem and, at one end of the stem, a housing for an end portion of a post, wherein the housing is open at an end remote from the stem and includes opposite side walls and a bottom wall, wherein there is a respective opening in each side wall and wherein a lug which is integral with the side wall projects from a margin of the opening outwardly of the housing.

6. A post support according to Claim 5 wherein the housing further comprises a pair of limbs which project from respective ones of the side walls and which are adapted for co-operation with a fastener, by means of which the limbs can be flexed relative to the side wall and tightened onto an end portion of a post, when that end portion occupies the housing, and wherein said bottom and side walls, said lugs and said limbs are all formed from a single piece of sheet material.

7. A post support according to Claim 6 wherein the housing further comprises a rear wall which is remote from the limbs and which includes a joint extending longitudinally of the stem.

8. A method of forming a post support comprising an elongated stem and, at one end of the stem, a housing for an end portion of a post, wherein there is formed a channel having a base, flanges along opposite margins of the base and respective flaps defined in opposite end portions of the base, the flaps are bent relative to the base to lie outside the channel, said end portions of the base are bent at right angles to a mid-portion of the base to form mutually parallel opposite side walls of the housing and wherein the stem is attached to the mid-portion of the base at the outside of the housing.

9. A method according to Claim 8 wherein slits are formed in one of said flanges to divide opposite end portions of the one flange from an intermediate portion thereof and wherein said end portions of the one flange are adapted to co-operate, in the completed support, with a fastener for deflecting the end portions relative to the side walls to clamp in the housing an end portion of the post which is disposed in the housing, when the post support is in use.

10. A post support substantially as herein described with reference to and as illustrated in the accompanying drawing.

11. Any novel feature or novel combination of features disclosed herein or in the accompanying drawing.

Amendments to the claims
have been filed as follows

1. A post support comprising an elongated stem and, at one end of said stem, a post engaging part adapted for co-operation and secure engagement with a post, wherein said post support is provided with means extending outwardly therefrom, said means being adapted for engagement with a gravel board or the like.

2. A post support according to Claim 1 wherein said ground engaging means is provided on said engagement part.

3. A post support according to Claim 1 or Claim 2 wherein said post engagement means comprises a housing adapted to accommodate the lower end of a post and wherein said gravel board engagement means comprises one or more lugs extending outwardly from a pair of opposite sides of said housing.

4. A post support according to Claim 3 wherein said lugs are secured to said housing.

5. A post support according to Claim 3 wherein said lugs are formed integrally with said housing.

6. A post support comprising an elongated stem and, at one end of the stem, a housing for an end portion of a post, wherein the housing is open at an end remote from the stem and includes opposite side walls and a bottom wall, wherein there is a respective opening in each side wall and wherein a lug which is integral with the side wall projects from a margin of the opening outwardly of the housing.

7. A post support according to Claim 6 wherein the housing further comprises a pair of limbs which project from respective ones of the side walls and which are adapted for co-operation with a fastener, by means of which the limbs can be flexed relative to the side wall and tightened onto an end portion of a post, when that end portion occupies the housing, and wherein said bottom and side walls, said lugs and said limbs are all formed from a single piece of sheet material.

8. A post support according to Claim 7 wherein the housing further comprises a rear wall which is remote from the limbs and which includes a joint extending longitudinally of the stem.

9. A method of forming a post support comprising an elongated stem and, at one end of the stem, a housing for an end portion of a post, wherein there is formed a channel having a base, flanges along opposite margins of the base and respective flaps defined in opposite end portions of the base, the flaps are bent relative to the base to lie outside the channel, said end portions of the base are bent at right angles to a mid-portion of the base to form mutually parallel opposite side walls of the housing and wherein the stem is attached to the mid-portion of the base at the outside of the housing.

10. A method according to Claim 9 wherein slits are formed in one of said flanges to divide opposite end portions of the one flange from an intermediate portion thereof and wherein said end portions of the one flange are adapted to co-operate, in the completed support, with a fastener for deflecting the end portions relative to the side walls to clamp in the housing an end portion of the post which is disposed in the housing, when the post support is in use.

11. A post support substantially as herein described with reference to and as illustrated in the accompanying drawing.

12. Any novel feature or novel combination of features disclosed herein or in the accompanying drawing.

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